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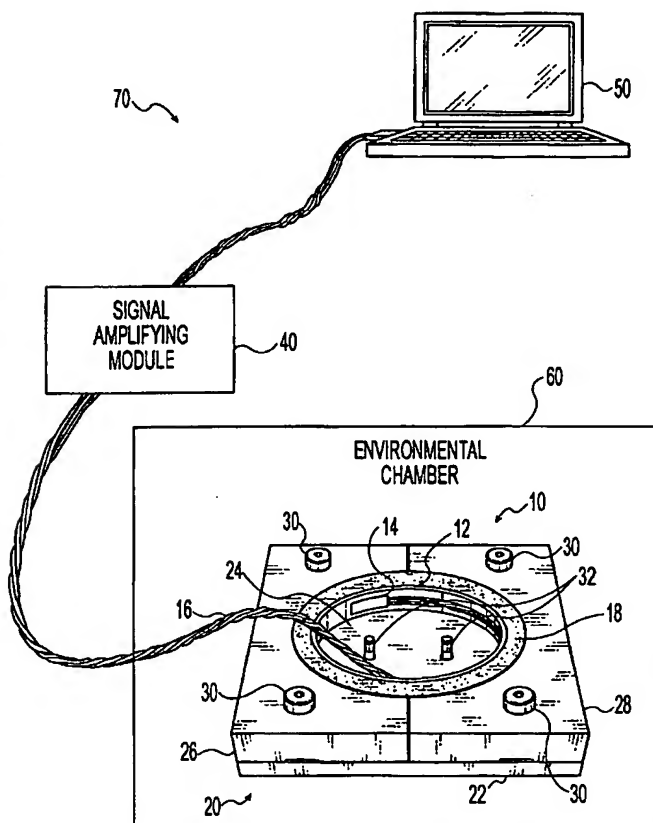
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(54) Title: DEVICE AND METHOD FOR TESTING PAVING MATERIALS



(57) Abstract: A device and method for directly measuring the critical temperatures for thermal cracking of asphalt binders. The exemplary comprises a metal ring, a strain gauge attached to the inner surface of the ring, an environmental chamber, one or more signal amplifiers, and a data acquisition system such as a laptop computer running suitable data analysis software. A thermocouple may also be attached to the inside of the tube to closely monitor the ring temperature. A mold that is also a component of the present invention is used to create a circular asphalt binder test specimen. When properly cast the specimen encircles the metal ring. The specimen and ring are placed within the environmental chamber for analysis. Development of thermal stress (induced by temperature reduction within the environmental chamber) within the asphalt binder test specimen is monitored by the strain gauge and the cracking temperature is directly determinable from the strain reading.